CLAIMS:

1. Memory device comprising an information plane comprising an electro-magnetic material constituting an array of bit locations, a magnetic state of said material at a bit location representing the value thereof, and an array of electro-magnetic sensor elements that are aligned with the bit locations, characterized in that the information plane is programmable or programmed via a separate magnetic writing device.

2. Device as claimed in claim 1, wherein the electro-magnetic sensor elements comprise read-only sensor elements that are sensitive to, but unable to change, said magnetic state of the electro-magnetic material.

3. Device as claimed in claim 1 or 2, wherein the device comprises a housing for encapsulating the array of electro-magnetic sensor elements, which housing has an interface surface for cooperating with a programming surface of the writing device for receiving a magnetic field for magnetizing the electro-magnetic material at the bit locations.

4. Device as claimed in claim 1 or 2, wherein the device comprises a housing for encapsulating the array of electro-magnetic sensor elements, which housing has a protective cover for preventing selectively changing said magnetic state at the bit locations via a magnetic field.

5. Device as claimed in claim 4, wherein the protective cover comprises a magnetically shielding material.

6. Device as claimed in claims 1 or 2, wherein the electro-magnetic sensor elements comprise read-write elements that are aligned with further bit locations, which read-write elements are sensitive to, and also able to change, said magnetic state of the electro-magnetic material.

7. Device as claimed in claim 6, wherein the read-only sensor elements and the read-write elements are arranged in a single array.

8. Writing device for programming a memory device as claimed in claim 1, characterized in that the device comprises a programming surface for cooperating with the information plane of the memory device, and means for generating a magnetic field at the programming surface for magnetizing the electro-magnetic material at the bit locations.

9. Writing device as claimed in claim 8 for programming a memory device as claimed in claim 3, characterized in that the programming surface is arranged for cooperating with the interface surface of the housing of the memory device.

10. Writing device as claimed in claim 8 or 9, wherein the means for generating a magnetic field comprise at least one of the following:
- an array of write elements that are individually controllable; or
- an array of permanent magnetic elements; or
- a magnetic head and scanning means for scanning the information plane at the programming surface via the head.

11. Method of manufacturing a memory device as claimed in claim 1, the method comprising a step of magnetizing the electro-magnetic material at the bit locations according to predefined data before encapsulating the device.

12. Method of programming a memory device as claimed in claim 1 using a writing device as claimed in claim 8, the method comprising a step of magnetizing the electro-magnetic material at the bit locations of the memory device according to predefined date.